

B10 --Block 1 [SEQ ID NO:24]: VEEK VEES VEEN DEES VEEN VEEN VEEN DDGS VASS--

Please replace prenumbered line 30 at page 17 as follows:

B11 --Block 2 [SEQ ID NO:25]: VAPT VEEIVAPT VEEIVAPS VVESVAPS VEESVAPS--

Please delete the substitute Sequence Listing submitted December 22, 2000.

Page 41 (Abstract), after the last line, beginning on a new page, please insert the attached second substitute Sequence Listing.

### IN THE CLAIMS

Please amend the claims as shown in the marked-up copy to read as follows:

B12 --32. (Amended) The polypeptide molecule according to Claim 27, displaying at least 70% homology with the sequence depicted in Figure 3 (SEQ ID NO: 4).--

### REMARKS

Claims 27-54 are pending in the present application.

Applicants have now submitted a second substitute Sequence Listing and a corresponding computer-readable Sequence Listing. The sequence information recorded in the corresponding computer-readable Sequence Listing is identical to the paper copy of the second substitute Sequence Listing. Support for all of the sequences listed in the second substitute Sequence Listing is found in the present application as originally filed. No new matter is believed to have been introduced by the submission of the second substitute Sequence Listing and the corresponding computer-readable Sequence Listing.

Applicants submit that the present application is ready for examination on the merits.

Early notice to this effect is earnestly solicited.

Respectfully submitted,

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**Marked-Up Copy**

Docket No.: 200773US0 DIV

Serial No: 09/742,096

**IN THE SPECIFICATION**

Please replace the paragraph at page 5, prenumbered lines 22-34, as follows:

--The subject of the invention is polypeptide molecules containing at least ten consecutive amino acids of the amino acid sequence shown in Figure 2 and designated SEQ ID No. 2, and representing LSA-3, the following polypeptides being excluded:

- RDELFNELLNSVDVNGEVKENILEESQVNDDIFNSLVKSVQQEQQHNV [SEQ ID NO:10]
- VEESVEENDEESVEENVEENVENNDDGSVASSVEESIASSVDESIDSSIE-ENVAPTVEEIVAPTVEEIVAPSVVEKCAPSVVEESVAPSVEESVAEMLKER (729S) [SEQ ID NO:11]
- RDELFNELLNSVDVNGEVKENILEESQVNDDIFNSLVKSVQQEQQHN [SEQ ID NO:12]
- DELFNELLNSVDVNGEVKENILEESQ, (NRI) [SEQ ID NO:13]
- LEESQVNDDIFSNSLVKSVQQEQQHNV, (NRII) [SEQ ID NO:14]
- VESVAPSVEESVAPSVEESVAENVEESV. (729RE) [SEQ ID NO:15]--

Please replace the paragraph at page 6, prenumbered lines 4-16, as follows:

--The experimental results and the comparisons of non-repeat sequences between different P.falciparum isolates indicate the existence of at least 70% homology between equivalent antigens of the liver stage of the parasite. Thus any peptide molecule displaying

at least 70% homology with any one of the molecules defined above forms part of the invention, as do those displaying at least 70% homology with the following sequence:

Leu Leu Ser Asn Ile Glu Glu Pro Lys Glu Asn Ile Ile Asp

Asn Leu Leu Asn Asn Ile (CT1) [SEQ ID NO:16]

lying between amino acids 140 and 159 of K1 or 23 and 42 of T9/96.--

Please replace the paragraph at page 9, prenumbered lines 13-15, as follows:

--The invention also covers the coding sequence originating from the clone T9/96 depicted in Figure 3 by SEQ ID No. [3] 4.--

Please replace the paragraph at page 10, prenumbered line 33, to page 11, prenumbered line 8, as follows:

--By way of example of DNA or RNA primers according to the invention, the following pairs of sequences may be mentioned:

S1: GTGATGAACTTTTAAATGAATTATTA AAA (SEQ ID No.[4] 6)

S2: TGTTGTTCTTGTTGAACACTTTTACTAA (SEQ ID No. [5] 7)

whose respective positions on the LSA-3/K1 gene depicts [sic] in Figure 1 are from 695 to 722 and from 829 to 799 (reading in the reverse direction), or the pair:

6.1: GGTATCGAACTGAGGAAATAAAGG (SEQ ID No. [6] 8)

6.2: CATAGCAGGAACATCAACATCCAC (SEQ ID No. [7] 9)

whose respective positions are 2668 to 2692 for 6.1 and 3456 to 3433 for 6.2 (reading in the reverse direction).--

Please replace the paragraph at page 11, prenumbered lines 9-11, as follows:

--The information regarding the sequences ID No. [4]6, ID No. [5]7, ID No. [6]8 and ID No. [7]9 are detailed at the end of the description.--

Please replace the paragraph at page 15, prenumbered lines 4-11, as follows:

--Figure 3 depicts the sequence ID No. [3]4 of the portion sequenced in the parasite clone T9/96 (1890 base pairs), the upper line being the nucleotide sequence and the lower line the peptide sequence. In this clone, the CT1 sequence lies between nucleotides 67 and 126, the actual fragment DG679 beginning at nucleotide 207. The fragment 729RE lies between nucleotides 547 and 629.--

Please replace prenumbered line 1 at page 17 as follows:

--Block 1 [SEQ ID NO:21]: (aa223) VEEK VEES VEEN DEES VEEN VEEN VEEN--

Please replace prenumbered line 4 at page 17 as follows:

--Block 2 [SEQ ID NO:22]: (aa279) VAPT VEEIVAPS VVESVAPS VEESVEEN--

Please replace prenumbered line 21 at page 17 as follows:

--Block 3 [SEQ ID NO:23]:--

Please replace prenumbered line 27 at page 17 as follows:

--Block 1 [SEQ ID NO:24]: VEEK VEES VEEN DEES VEEN VEEN VEEN DDGS  
VASS--

Please replace prenumbered line 30 at page 17 as follows:

--Block 2 [SEQ ID NO:25]: VAPT VEEIVAPT VEEIVAPS VVESVAPS VEESVAPS--

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**IN THE CLAIMS**

Please amend the claims as follows:

--32. (Amended) The polypeptide molecule according to Claim 27, displaying at least 70% homology with the sequence depicted in Figure 3 (SEQ ID NO: [3] 4).--

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